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Express Mail No.: EL456498715US  
Date of Deposit: 15 October 1999

Sir:

Transmitted herewith for filing is the patent application of

Inventor(s): John METSIG et al.

For: A METHOD FOR ELECTRONICALLY MERGING DIGITIZED DATA SYSTEM OF GENERATING BILLING STATEMENTS FOR PUBLISHED ADVERTISING

Enclosed are:

- ☒ Seven (7) pages of specification, Six (6) pages of claims (Claims 1-20), One (1) page of abstract, and Two (2) sheets of drawings (Figs. 1-7).
- ☒ Unexecuted combined Oath or Declaration, Power of Attorney and Petition. (3 pages)
- ☒ Certificate of Mailing by Express Mail. (2 pages)
- ☐ Information Disclosure Statement, together with Form PTO-1449 ( page(s)) and a copy of each and every cited reference.
- ☒ Letter Re Filing Pursuant to 37 CFR 1.53.
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TOTAL CLAIMS	less 20		X 09 =		OR	X 18 =	
INDEPENDENT CLAIMS	less 3		X 39 =		OR	X 78 =	
MULTIPLE DEPENDENT CLAIMS PRESENTED			+130=		OR	+260 =	
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Title: A METHOD FOR ELECTRONICALLY MERGING  
DIGITIZED DATA SYSTEM OF GENERATING  
BILLING STATEMENTS FOR PUBLISHED  
ADVERTISING

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- Transmittal Letter
- Seven (7) pages of specification, Six (6) pages of claims (Claims 1-20), One (1) page of abstract, and Two (2) sheets of drawings (Figs. 1-7)

Express Mail No.: EL456498715US

- Unexecuted combined Oath or Declaration, Power of Attorney and Petition (3 pages)
- Letter Re Filing Pursuant to 37 CFR 1.53
- Return Receipt Postcard

Respectfully submitted,



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MAILED 15 Oct. 1999

## **BACKGROUND OF THE INVENTION**

### **Field of the Invention**

The present invention relates to means for creating a billing statement automatically and digitally with attached advertising copy and the published page containing such advertising copy.

### **Discussion of Related Art**

Publishers of periodicals and dailies derive significant revenue from printing advertisements in their publications. Traditionally, the method of billing the advertiser, or customer, for the publication of the customer's advertisement is to send a billing sheet, or statement, listing the date of publication, an advertisement identifier, and the charge for the advertisement. Along with each billing line item is included a copy of the advertisement and a copy of the actual page or pages on which the advertisement was published. These hard copies of the advertisements and page are often called tearsheets. The tearsheets were, in the past, manually created by persons who gathered the physical tearsheets and attached them to the billing statements, resulting in a great expenditure of labor. Also, the billing statement created in this way can become physically bulky and unnecessarily hard to handle and expensive to deliver to the customer.

Therefore, there exists a need to automate this billing process and digitize it to make for easier storage and delivery.

## SUMMARY OF THE INVENTION

The present invention provides for automated creation, and if desired, removable storage and delivery of billing statements for published advertisements. A method according to the present invention requires that the advertisement copy and the page on which it is published, if different, both be put in a digital document format such as tiff, jpeg or the like; and assigned unique customer, or advertiser, identifiers, such as serial numbers, identifying numbers, unique names, or the like associated with the document. The advertisement copy and the page may contain cross referenced indicators. For example, the information header on the advertisement copy may contain information on its page location, while the page document information header may contain information on each customer having an advertisement thereon.

The advertisement copy and page files of images and their associated information headers are created; whether by original composition on a digital publishing system or through later digitization by scanning or the like; and stored in a first, or first and second publications searchable database. A billing statement application is then overlayed on or interfaced with the publications databases in order to match the unique identifiers of the customers in the statement application to the unique customer identifiers in the publications databases. A search and retrieve command is sent to identify each advertisement and its associated page, within a particular date range and for a particular publication, if the publication database file

structure makes this necessary. Copies of the digital documents representing the published advertisement copy and its associated page are linked, or referenced, to the billing document line items and stored as files within the billing statement application.

The billing statement, with each associated advertisement copy and page image, may then be electronically accessed through the billing statement application and transmitted electronically or stored on removable digital storage media such as diskettes or CD-Roms as desired for permanent record and shipping to the customer.

#### **BRIEF DESCRIPTION OF THE DRAWINGS**

Fig. 1 is a billing statement document according to the present invention.

Fig. 2 illustrates a computer system for running a billing system according to the present invention.

Fig. 3 illustrates an advertisement, or ad copy, retrievable by the present invention.

Fig. 4 illustrates the publication page on which the advertisement copy appears.

Fig. 5 schematically illustrates the digital billing statement, or invoice of the present invention document.

Fig. 6 schematically illustrates the digital advertisement copy document and information statement.

Fig. 7 schematically illustrates the digital publication page containing the advertisement copy and an information header thereof.

## DESCRIPTION OF PREFERRED EMBODIMENTS

Referencing Figs. 1 and 2, a billing statement template 10 is contained in the server of a computer system 12 within a billing statement application 14. The computer system 12 further contains a publication database 16 generally associated with an electronic publishing/composition application 13 for the digital construction of stories, text, pictures, advertisements, and the like making up a publication such as a newspaper or magazine.

As seen in Fig. 3, an advertisement image copy 18 comprising text, pictorial images, and the like; is contained in a digital advertisement document 20 which also contains an information header 22 containing a customer identifier, such as a unique name, number, or the like associated with the customer paying for the publication of the image copy 18.

Referencing Fig. 4, the advertisement image copy 18, when it is to be published, is digitally placed within a page site 24 of a publication, along with other images 26, text files 28, and the like which make up that page 24 of the publication. The page site 24 contains an information header 30 containing such information as the publication name, date, page number, document file identifiers, advertiser customer identifier listings, etc.

Referencing Fig. 5, the billing statement or invoice 10 has a customer identifier 32 which may be the same as a customer identifier 34 in the publication database 16 or the two customer identifiers may be cross referenced in the billing statement application 14.



Referencing Fig. 6, the digital advertisement document 20 contains an information header 22 with all relevant information such as the customer identifier 34 and an advertisement copy serial number 36 identifying the particular image 18 of the advertisement which is preferably a separate file within the advertisement document 20.

Referencing Fig. 7, the page site 24 is a document, or group of cross referenced documents, with an information header 30 detailing the publication number 38, the page number 40, publication date 42, and a list of the customers identifiers 44 for the advertisements placed on that page.

With the information headers as shown in Figs. 6 and 7, a search and retrieve routine can be initiated from the billing statement application 14 for an individual customer by specifying a customer identifier and any qualifying ranges for the billing cycle such as a date range, publication volume numbers, etc. The customer identifiers may be cross matched as necessary between the billing statement application and the publishing application through the use of look up tables, a precompiled and referenced association table or the like. The search will then take place in the publication database either in the advertisement copy information headers database 46 or the page site information headers database 48, or both, depending on how the publication application has allotted the customer identifiers and linked the associated advertisement images between the advertisement copy database and the page site database. Each instance of a customer identifier number "hit", or retrieval, will have an associated advertisement copy number and data identifier associated

therewith. Each instance of a customer's advertisement being published then is listed as a line item, logo 50, on the billing statement 10. Copies of the digital advertisement document 20 and the page site 24 are retrieved, cross referenced to the line items 50 and the billing statement 10, and stored in or with the billing statement application 14 and in addition may be printed to removable storage 52 or downloaded as by telephone line 54 to the customer's information systems (not shown).

While referred to as files, documents, and sites, it will be appreciated that there are myriad ways to cross reference, store, and process the relevant image blocks going into the advertisement copy and page site make up. The examples of the Preferred Embodiment are intended to be illustrative only and the invention herein is limited only by the appended claims.

WE CLAIM:

1. A method of constructing a billing statement comprising:
  - a. establishing a unique identifier for each customer;
  - b. creating a first digital document representing an advertisement with a unique advertisement identifier and associating the customer identifier with said advertisement identifier;
  - c. creating a second digital document representing an invoice for advertisements;
  - d. finding the advertisement documents in a first advertisement data base and copying the advertisements to an invoice database; and
  - e. storing the first and second documents in a common file.
2. The method of claim 1 including the further step of copying the digital documents to a removable storage medium.
3. The method of claim 1 including the further step of listing each advertisement document as a line item on the invoice document.
4. The method of claim 1 including the further step of displaying the first and second documents in human readable format.

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5. The method of claim 1 father including the step of  
creating a third digital document representing a publication page  
containing the advertisement and associating the publication page with said  
advertisement identifier.

6. The method of claim 5 father including the step of  
finding the published page of the advertisement in a second publication  
data base and copying the published page to the invoice database.

7. The method of claim 6 father including the step of  
storing the published page document in a common file associated with  
the invoice document.

8. A method of constructing a billing statement comprising:  
a. establishing a unique identifier for each customer;  
b. creating a first digital document representing an advertisement  
with a unique advertisement identifier and associating the customer identifier with  
said advertisement identifier;  
c. creating a second digital document representing a publication  
page with the advertisement and associating the publication page with said  
advertisement identifier;

d. creating a third digital document representing an invoice for advertisements including specifying an identifier range for invoiced advertisements;

e. finding the advertisement documents by searching the unique customer identifier in a first data base and copying the advertisements to an invoice database and listing each found advertisement as a line item on the invoice;

f. finding the published page of the advertisement and copying the published page to the invoice database; *and*

g. storing the first and second documents in a common file associated with the invoice document.

9. The method of claim 8 further including finding the published page by searching the unique advertisement identifier.

10. The method of claim 8 further including finding the published page by searching the unique customer identifier.

11. The method of claim 8 including the further step of copying the digital documents to a removable storage medium.

12. The method of claim 8 including the further step of listing each advertisement document as a line item on the invoice document.

13. The method of claim 8 including the further step of displaying the first, second, and third documents in human readable format.

14. The method of claim 8 wherein the step of creating a third digital document representing an invoice for advertisements includes specifying an identifier range for the advertisement documents.

15. A method of constructing a billing statement for published advertisements comprising:

- a. establishing a unique customer identifier for a customer to be billed;
- b. creating a first digital document representing a billing invoice and associating the billing invoice with the unique customer identifier and storing the billing invoice in an invoice file;
- c. creating a second digital document representing an advertisement with a unique advertisement identifier and associating the customer identifier with the advertisement identifier and storing the advertisement document in an advertisement database;

d. creating a third digital document representing a publication page, with the advertisement thereon, and having a unique page identifier; and associating the publication page identifier with said advertisement identifier and storing the publication page document in a publication page database;

e. searching for advertisement documents in the advertisement data base according to the customer identifier, identifying advertisement documents according to the customer identifier, and copying the identified advertisement documents to the invoice file;

f. searching for publication pages associated with the advertisement documents in the publication page database and copying the associated publication pages to the invoice file; and

g. cross referencing the first, second, and third documents in the invoice file .

16. The method of claim 15 including the further step of copying the digital documents to a removable storage medium.

17. The method of claim 15 including the further step of listing each advertisement document as a line item on the invoice document.

18. The method of claim 17 including the further step of displaying the first, second, and third documents in human readable format.





## ABSTRACT OF THE DISCLOSURE

A method of constructing a billing statement for publishing advertising or the like starts with digitizing the advertisement and the publication page the advertisement is on and assigning a unique identifier to at least the advertisement in an information header associated with the published image of the advertisement copy. The publication page may also be uniquely identified apart from the advertisement and contain reference to the advertisements thereon in its information header. An invoice is generated which searches at least the publication page database to find both the advertisement and page documents. The advertisement and page documents are copied and stored with the billing statement in a separate file where they are linked or merged into one document so that manual preparation of invoices with advertisement copy and tear sheets no longer need be done.

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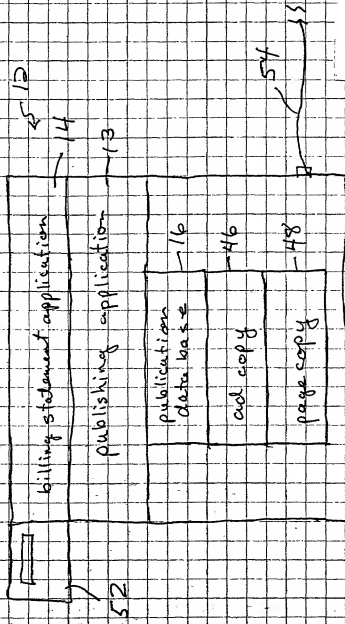


Fig 2

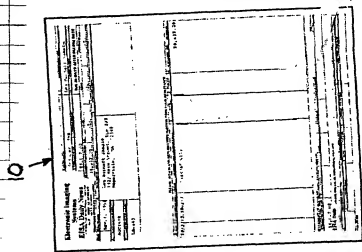


Fig. 1

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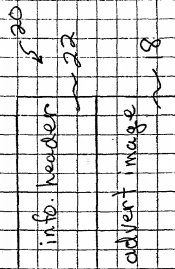


Fig. 3

Fig. 4

24

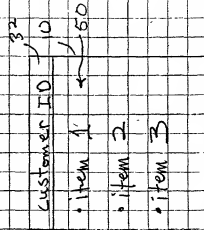
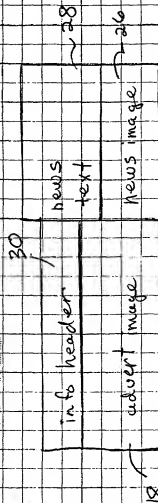


Fig. 5

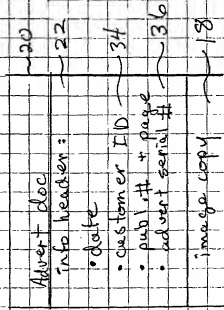


Fig. 6

34

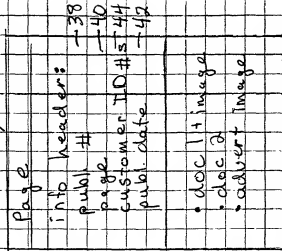


Fig. 7

**COMBINED DECLARATION, POWER OF ATTORNEY AND PETITION**

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declare that we have reviewed and understand the contents of the attached specification and claims and we verily believe that we are the original, first and joint inventors or discoverers of the invention or discovery in

**A METHOD FOR ELECTRONICALLY MERGING DIGITIZED  
DATA SYSTEM OF GENERATING BILLING STATEMENTS  
FOR PUBLISHED ADVERTISING**

described and claimed in the attached specification; that this application discloses and claims subject matter disclosed in our earlier Provisional patent application of which we hereby claim the benefit under 35 U.S.C. § 119(e), Serial No. 60/104,538, filed 16 October 1998; that as to the subject matter of this application which is common to said earlier application, that I do not know and do not believe that this invention was ever known or used in the United States before my invention or discovery thereof; that to the best of my knowledge and belief the invention has not been in public use or on sale in the United States more than one year prior to my application, or patented or made the subject of an inventor's certificate in any foreign country prior to the date of my application on an application filed by myself or my legal representatives or assigns more than twelve months prior to my application in this country; that I acknowledge my duty to disclose information of which I am aware which is material to the examination of this application in accordance with 37 C.F.R. 1.56(a); and that

**COMBINED DECLARATION, POWER  
OF ATTORNEY AND PETITION**

no application for patent or inventor's certificate on this invention or discovery has been filed by me or my legal representatives or assigns in any country foreign to the United States, except as follows:

None

**POWER OF ATTORNEY**

We hereby appoint the following attorneys to prosecute this application and transact all business in the United States Patent and Trademark Office connected therewith:

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**PETITION**

Wherefore we Pray that Letters Patent be granted to us for the invention or discovery described and claimed in the attached specification and claims, and we hereby subscribe our names to the attached specification and claims, Declaration, Power of Attorney and this Petition.

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OF ATTORNEY AND PETITION

DECLARATION

The undersigned further declare that all statements made herein of their knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code, and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

\_\_\_\_\_  
Date

\_\_\_\_\_  
Willard J. WEIBEL

\_\_\_\_\_  
Date

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Maria Elena LOPEZ

\_\_\_\_\_  
Date

\_\_\_\_\_  
John METSIG

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